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EXAMINER	
BATTAGLIA, MICHAEL V	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/804,492	Applicant(s) TAKASUKA ET AL.	
	Examiner Michael V Battaglia	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action, dated May 17, 2004, is in response to Applicant's amendment, filed March 15, 2004. Claims 1-22 are pending.

Claim Rejections - 35 USC § 102

1. Claims 1-11 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohyama (US 6,512,608).

In regard to claim 1, Ohyama discloses an optical head device that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows and guide grooves, comprising: a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows and guide grooves (Figs. 14-15, elements 25 and 27 and Col. 8, lines 23-28); and optical elements disposed on an optical path between the plurality of semiconductor lasers and an optical information recording medium (Fig. 14, element 33 and the lens in between elements 33 and 21), wherein the plurality of semiconductor lasers are disposed so that beam spots, formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers are aligned substantially parallel to a pit-row direction or a guide groove direction in the optical information recording medium (Fig. 14).

In regard to claim 2, Ohyama discloses that the optical head device further comprises a photodetector where returning light from the optical information recording medium enters (Figs. 15 and 17, elements 35, 37, 43, 45, 47, 49, 55-58, 65, 67, 69 and 71).

In regard to claim 3, Ohyama discloses that the plurality of semiconductor lasers have different emission wavelengths from one another (Col. 19, lines 54-56).

In regard to claim 4, Ohyama discloses that the two semiconductor lasers are provided and have different emission wavelengths, each of which is selected from a group consisting of ranges of: 630 nm to 690 nm, 780 nm to 820 nm, and 200 nm to 450 nm (Col. 8, lines 23-28 and Col. 19, lines 54-56).

In regard to claim 5, Ohyama discloses that the beam emission points of the plurality of semiconductor lasers are aligned on a substantially straight line and are spaced at 150 um or less (Col. 19, lines 56-60).

In regard to claim 6, Ohyama discloses that one of the optical elements is a diffraction grating (Figs. 14-16, element 33).

In regard to claim 7, Ohyama discloses that the diffraction grating is divided into 2n (where n indicates a natural number) diffraction regions with different grating periods from one another (Figs. 14-16, elements 29, 31 and 33).

In regard to claim 8, Ohyama discloses that the dividing lines that divide the diffraction regions are positioned substantially parallel to or substantially perpendicular to the pit-row direction or the guide groove direction in the optical information recording medium (Figs. 14-16, elements 29, 31 and 33).

In regard to claim 9, Ohyama discloses that one of the dividing lines that divide the diffraction regions divides returning light from the optical information recording medium into two substantially equal parts (Fig. 16, X-axis).

In regard to claim 10, Ohyama discloses that the diffraction grating is divided into 2n (where n indicates a natural number) diffraction regions with different grating pitch directions from one another (Figs. 14-16, elements 29, 31 and 33).

In regard to claim 11, Ohyama discloses that the dividing lines that divide the diffraction regions are positioned substantially parallel to or substantially perpendicular to the pit-row direction or the guide groove direction in the optical information recording medium (Figs. 14-16, elements 29, 31 and 33).

In regard to claim 19, Ohyama discloses that the optical head device further comprises a plurality of photodetectors where returning light from the optical information recording medium enters, wherein the plurality of semiconductor lasers and at least part of the plurality of photodetectors are integrated on one substrate (Figs. 14-15, element 39).

2. Claims 1-3, 6, 10-11, 15 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Shindo (US 5,963,515).

In regard to claim 1, Shindo discloses an optical head device that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows and guide grooves, comprising: a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows and guide grooves (Fig. 7, elements 32-33; Col. 11, line 16; and Col. 13, line 67-Col. 14, line 2); and optical elements (Fig. 7, elements 13, 15-16, 18, 38 and 42) disposed on an optical path between the plurality of semiconductor lasers and an optical information recording medium (Fig. 7, element 17), wherein the plurality of semiconductor lasers are disposed so that beam spots (Fig. 7A, spots formed by elements MB and SB1-SB4), formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers are aligned substantially parallel to a pit-row direction or a guide groove direction in the optical information recording medium (Fig. 4 and Col. 14, lines 38-42 and 50-54).

In regard to claim 2, Shindo discloses that the optical head device further comprises a photodetector where returning light from the optical information recording medium enters (Fig. 7, element 20).

In regard to claim 3, Shindo discloses that the plurality of semiconductor lasers have different emission wavelengths from one another (Col. 13, lines 41-42).

In regard to claim 6, Shindo discloses that one of the optical elements is a diffraction grating (Fig. 7, element 13).

In regard to claim 10, Shindo discloses that the diffraction grating (Fig. 3, element 13) is divided into 2n (where n indicates a natural number) diffraction regions with different grating pitch directions from one another (Fig. 3, elements 13C and 13D).

In regard to claim 11, it is noted that side beams diffracted by a diffraction grating are displaced from the 0-order beam in a direction perpendicular to the direction of the diffraction grating. Therefore, it is inherent that the dividing line that divides the diffraction regions of Shindo are positioned substantially perpendicular to the pit-row direction or the guide groove direction in the optical information recording medium because the grating of the first diffraction region (Fig. 3, element 13C) is parallel to the dividing line (Fig. 3) and produces beam spots MS, SS1 and SS4 (Fig. 4 and Col. 6, lines 16-19) that are substantially parallel to the guide groove (Fig. 4, element 17a).

In regard to claim 15, Shindo discloses that the optical head device further comprises a plurality of photodetectors (Fig. 5, elements 20a-20e) where returning light from the optical information recording medium enters, wherein the optical elements and the plurality of photodetectors are disposed so that part of returning light from the optical information recording medium, which originates in each of the light beams emitted from the plurality of semiconductor

lasers, enters one of the plurality of photodetectors at a time. It is noted that parts of returning light will enter all of the plurality of photodetectors, but the part of returning light that enters a particular one of the plurality of photodetectors will only enter that particular photodetector.

In regard to claim 22, Shindo discloses an optical recording and reproducing apparatus comprising an optical head device (Fig. 7, element 41), the optical head device being configured to carry out reproduction on or recording with respect to a plurality of optical information recording media of various types of pit rows or guide grooves (Col. 14, lines 24-27) comprising; a plurality of semiconductor lasers (Fig. 7, elements 32-33 and Col. 11, line 16) with different emission wavelengths from one another that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows or guide grooves (Col. 13, lines 41-42 and Col. 13, line 67-Col. 14, line 2); and optical elements (Fig. 7, elements 13, 15-16, 18, 38 and 42) disposed on an optical path between the plurality of semiconductor lasers and an optical information recording medium (Fig. 7, element 17), wherein the plurality of semiconductor lasers are disposed so that beam spots (Fig. 7A, spots formed by elements MB and SB1-SB4), formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers are aligned substantially parallel to a pit-row direction or a guide groove direction in the optical information recording medium (Fig. 4 and Col. 14, lines 38-42 and 50-54).

Claim Rejections - 35 USC § 103

3. Claims 1-6, 14-17, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita (US 5,886,964) in view of Uchizaki et al (hereafter Uchizaki) (US 6,646,975).

In regard to claim 1, Fujita discloses an optical head device (Fig. 5) that is configured to carry out reproduction or recording with respect to an optical information recording media

comprising: a semiconductor laser (Fig. 5, element 1) that is provided so as to correspond to an optical information recording medium (Fig. 5, element 5); and optical elements (Fig. 5, elements 2, 4, 39, and 40) disposed on an optical path between the semiconductor laser and an optical information recording medium, wherein the semiconductor laser is disposed so that beam spots (Figs. 5 and 7, elements 41-43), formed on the optical information recording medium, of light beams emitted from the semiconductor laser are aligned substantially parallel to a pit-row direction or a guide groove direction in the optical information recording medium (Figs. 5 and 7, elements 41-43). Fujita does not disclose that the optical head device is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows and guide grooves and does not disclose a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows and guide grooves.

Uchizaki discloses an optical head device (Fig. 1) that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows and guide grooves, comprising: a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows and guide grooves (Fig. 7A, element 31' and Col. 12, line 56-Col. 13, line 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the optical head device of Fujita with a plurality of semiconductor lasers that correspond respectively to a plurality of optical information recording media of various types of pit rows and guide grooves as suggested by Uchizaki, the motivation being to make the

optical head device of Fujita compatible with a plurality of optical information recording media of various types of pit rows and guide grooves.

In regard to claim 2, Fujita discloses that the optical head device further comprises a photodetector where returning light from the optical information recording medium enters (Fig. 5, elements 25, 28, and 45).

In regard to claim 3, Uchizaki discloses that the plurality of semiconductor lasers have different emission wavelengths from one another (Col. 12, line 56-Col. 13, line 4).

In regard to claim 4, Uchizaki discloses that the two semiconductor lasers are provided and have different emission wavelengths, each of which is selected from a group consisting of ranges of: 630 nm to 690 nm, 780 nm to 820 nm, and 200 nm to 450 nm (Col. 12, line 56-Col. 13, line 4).

In regard to claim 5, Uchizaki discloses that the beam emission points of the plurality of semiconductor lasers are aligned on a substantially straight line and are spaced at 150 um or less (Fig. 7A and Col. 12, lines 1-2).

In regard to claim 6, Fujita discloses that one of the optical elements is a diffraction grating (Fig. 5, element 39).

In regard to claim 14, Uchizaki discloses that the plurality of semiconductor lasers are disposed on a heat sink made of metal or a semiconductor metal (Fig. 5, elements 31 and 41 and Col. 14, lines 14-19).

In regard to claim 15, Fujita discloses that the optical head device further comprises a plurality of photodetectors where returning light from the optical information recording medium enters, wherein the optical elements and the plurality of photodetectors are disposed so that part of returning light from the optical information recording medium, which originates in each of the light beams emitted from the plurality of semiconductor lasers, enters one of the plurality of

photodetectors at a time (Fig. 5, elements 25, 28, and 45). It is noted that parts of returning light will enter all of the plurality of photodetectors, but the part of returning light that enters a particular one of the plurality of photodetectors will only enter that particular photodetector.

In regard to claim 16, Fujita discloses that each of the plurality of photodetectors (Fig. 5, elements 25, 28, and 45) includes a light-receiving region divided into two parts in a direction that is substantially parallel to or substantially perpendicular to the pit-row direction or the guide groove direction in the optical information recording medium, part of returning light from the optical information recording medium being detected therein irrespective of which of the plurality of semiconductor lasers emits light beams. It is noted that the plurality of semiconductor lasers of Uchizeki are located extremely close to each other (Col. 12, lines 1-2), return to the same plurality of photodetectors (Fig. 8, elements 35 and 60 and Col. 12, lines 40-47), and that part of returning light from the optical information recording medium of would detected in the light-receiving region of Fujiki irrespective of which of the plurality of semiconductor lasers of Uchizeki emits light beams.

In regard to claim 17, Fujita discloses that a linear diffraction grating (Fig. 5, element 54) is included as one of the optical elements, and returning light from the optical information recording medium that originates in ± 1st-order diffracted light formed by the diffraction grating is detected in the light-receiving region.

In regard to claim 19, Fujita discloses a plurality of photodetectors where returning light from the optical information recording medium enters (Fig. 5, element 25, 28 and 45). Fujita does not disclose that the plurality of semiconductor lasers and at least part of the plurality of photodetectors are integrated on one substrate.

Uchizaki discloses a plurality of semiconductor lasers (Fig. 8, element 31) and at least part of the plurality of photodetectors (Fig. 8, element 35) are integrated on one substrate (Fig. 8, element 60). It is noted that the in the exploded perspective view of the central part of the optical integrated unit of Fig. 8, the reference numbers of the plurality of semiconductor lasers and the substrate are incorrect and should be reversed. Uchizaki teaches that integration of the plurality of semiconductor lasers and the plurality of photodetectors on a single substrate enables realization of a very thin, compact optical integrated unit (Col. 12, lines 54-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the plurality of semiconductor lasers and the plurality of photodetectors of Fujita on one substrate as suggested by Uchizaki, the motivation being to reduce the size of the optical head device by using a very thin, compact optical integrated unit.

In regard to claim 22, Fujita discloses an optical recording and reproducing apparatus comprising an optical head device, the optical head device comprising a semiconductor laser (Fig. 5, element 1); and optical elements (Fig. 5, elements 2, 4, 39, and 40) disposed on an optical path between the plurality of semiconductor lasers and an optical information recording medium (Fig. 5, element 5), wherein the plurality of semiconductor lasers are disposed so that beam spots (Figs. 5 and 7, elements 41-43), formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers are aligned substantially parallel to a pit-row direction or a guide groove direction in the optical information recording medium (Figs. 5 and 7, elements 41-43). Fujita does not disclose that the optical head device is configured to carry out reproduction on or recording with respect to a plurality of optical information recording media of various types of pit rows or guide grooves and does not disclose that the optical head device comprises a plurality of semiconductor lasers with different emission wavelengths from one

another that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows or guide grooves.

Uchizaki discloses optical recording and reproducing apparatus comprising an optical head device (Fig. 1) that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows and guide grooves, comprising: a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows and guide grooves (Fig. 7A, element 31' and Col. 12, line 56-Col. 13, line 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the optical recording and reproducing apparatus of Fujita with a plurality of semiconductor lasers that correspond respectively to a plurality of optical information recording media of various types of pit rows and guide grooves as suggested by Uchizaki, the motivation being to make the optical recording and reproducing apparatus of Fujita compatible with a plurality of optical information recording media of various types of pit rows and guide grooves.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita in view of Uchizaki as applied to claim 1 above, and further in view of Ootaki et al (hereafter Ootaki) (US 5,734,637).

Fujita in view of Uchizaki discloses the optical head device as claimed in claim 1. Fujita in view of Uchizaki does not disclose that the optical head device further comprises a rim-intensity correction means.

Ootaki discloses a rim-intensity correction means and teaches that an enhanced rim intensity allows for a reduced spot diameter and certain read out from a high density optical information recording medium (Col. 3, lines 48-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a rim intensity correction means in the optical head device of Fujita in view of Uchizaki as suggested by Ootaki, the motivation being to allow for a reduced spot diameter and certain read out from a high density optical information recording medium.

5. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita in view of Uchizaki as applied to claim 2, and further in view of Kajiyama et al (hereafter Kajiyama) (US 6,552,990).

In regard to claim 20, Fujita in view of Uchizak discloses the optical head device as claimed in claim 2 having a plurality of semiconductor lasers, optical elements, and a photodetector. Fujita discloses that an objective lens (Fig. 5, element 4) is provided as one of the optical elements. Fujita in view of Uchizak does not disclose that the objective lens is fixed to a package or that the plurality of semiconductor lasers, the optical elements, and the photodetector are disposed in the package.

Kajiyama discloses an optical head device wherein an objective lens (Figs. 51A and 51B, element 7) is fixed to a package (Figs. 51A and 51B, element 42) and that the plurality of semiconductor lasers (Figs. 51A and 51B, elements 1a and 1b), optical elements (Figs. 51A and 51B, elements 2-4 and 40-41), and a photodetector (Figs. 51A and 51B, element 8) are disposed in the package (Figs. 51A and 51B).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dispose the plurality of semiconductor lasers, the optical elements, and the photodetector of Fujita in view of Uchizaki into the package of Kajiyama and to fix the objective

lens to the package as suggested by Kajiyama, the motivation being to allow the elements of the optical head device to move back and forth in the radial direction while maintaining the spatial relation of the elements.

In regard to claim 21, Kajiyama discloses an optical head device further comprising a supporter (Figs. 51A and 51B, element 43), wherein the package is connected to the supporter movably with respect thereto (Figs. 51A and 51B).

6. Claims 1-2 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyama (US 5,881,035) in view of Uchizaki.

In regard to claim 1, Ueyama discloses an optical head device (Fig. 12) that is configured to carry out reproduction or recording with respect to an optical information recording media comprising: a semiconductor laser (Fig. 12, element 1) that is provided so as to correspond to an optical information recording medium (Fig. 12, element 6); and optical elements (Fig. 12, elements 3-4 and 13-14) disposed on an optical path between the semiconductor laser and an optical information recording medium, wherein the semiconductor laser is disposed so that beam spots, formed on the optical information recording medium, of light beams emitted from the semiconductor laser are aligned substantially parallel to a pit-row direction or a guide groove direction in the optical information recording medium (Fig. 6). Ueyama does not disclose that the optical head device is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows and guide grooves and does not disclose a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows and guide grooves.

Uchizaki discloses an optical head device (Fig. 1) that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of

various types of pit rows and guide grooves, comprising: a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows and guide grooves (Fig. 7A, element 31' and Col. 12, line 56-Col. 13, line 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the optical head device of Ueyama with a plurality of semiconductor lasers that correspond respectively to a plurality of optical information recording media of various types of pit rows and guide grooves as suggested by Uchizaki, the motivation being to make the optical head device of Ueyama compatible with a plurality of optical information recording media of various types of pit rows and guide grooves.

In regard to claim 2, Ueyama discloses that the optical head device further comprises a photodetector where returning light from the optical information recording medium enters (Fig. 12, element 15).

In regard to claim 6, Ueyama discloses that one of the optical elements is a diffraction grating (Fig. 12, element 14).

In regard to claim 7, Ueyama discloses that the diffraction grating (Fig. 12, element 14) is divided into 2n (where n indicates a natural number) diffraction regions (Fig. 12, elements 14a and 14b) with different grating periods from one another (Fig. 12).

In regard to claim 8, Ueyama discloses that the dividing line that divides the diffraction regions is positioned substantially parallel to or substantially perpendicular to the pit-row direction or the guide groove direction in the optical information recording medium (Fig. 12, element 14g and Col. 14, lines 66-67).

In regard to claim 9, Ueyama discloses that one of the dividing lines (Fig. 12, element 14g) that divide the diffraction regions divides returning light from the optical information recording medium into two substantially equal parts (Fig. 12, elements P1 and P2).

7. Claims 1 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al (hereafter Kato) (US 5,648,951) in view of Uchizaki.

In regard to claim 1, Kato discloses an optical head device (Fig. 15(a)) that is configured to carry out reproduction or recording with respect to an optical information recording media comprising: a semiconductor laser (Fig. 15(a), element 1) that is provided so as to correspond to an optical information recording medium (Fig. 15(a), element 4); and optical elements (Fig. 15(a), elements 2 and 3) disposed on an optical path between the semiconductor laser and an optical information recording medium, wherein the semiconductor laser is disposed so that beam spots (Fig. 15(a), elements 7, 24a and 24b), formed on the optical information recording medium, of light beams emitted from the semiconductor laser are aligned substantially parallel to a pit-row direction or a guide groove direction in the optical information recording medium (Fig. 15(a)). Kato does not disclose that the optical head device is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows and guide grooves and does not disclose a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows and guide grooves.

Uchizaki discloses an optical head device (Fig. 1) that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows and guide grooves, comprising: a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of

various types of pit rows and guide grooves (Fig. 7A, element 31' and Col. 12, line 56-Col. 13, line 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the optical head device of Kato with a plurality of semiconductor lasers that correspond respectively to a plurality of optical information recording media of various types of pit rows and guide grooves as suggested by Uchizaki, the motivation being to make the optical head device of Kato compatible with a plurality of optical information recording media of various types of pit rows and guide grooves.

In regard to claim 12, Kato discloses that the diffraction grating is sawtooth-shaped (Figs. 12(b) and Col. 9, lines 35-39).

In regard to claim 13, Kato discloses that the conventional form of the diffraction grating has grooves whose depths vary in a step-wise manner in constant period (Fig. 5(f) and Col. 12, lines 1-3 and 19-21).

Citation of Relevant Prior Art

8. Ohnishi et al (US 6,507,009) discloses an optical head device that has a plurality of semiconductor lasers each for reading from one of a plurality of optical recording mediums and produces a plurality of beam spots that are substantially parallel to the pit rows of the optical recording medium (Figs. 10 and 11). Choi (US 6,940,360) discloses an optical head device that has a plurality of light sources each for reading from one of a plurality of optical recording mediums and a diffraction grating that is divided into two regions with different grating pitches (Fig. 5). Takeda et al (US 6,016,300) (Figs. 15-17) and Yokota (US 5,065,380) (Figs. 1, 3 and 6)

disclose optical head devices that produce a plurality of beam spots that are substantially parallel to the pit rows of an optical recording medium using a diffraction grating.

Response to Arguments

9. Applicant's arguments, see pages 6-8, filed March 15, 2004, with respect to the rejections of claims that involve Fujita and Ando have been considered but are moot in view of the new ground(s) of rejection.

10. Applicant's arguments, see page 7, filed March 15, 2004, with regard to the rejections of claims 1-11 and 19 as being unpatentable over have been fully considered but they are not persuasive. Applicant argues that the effective filing date of Ohyama is later than Applicant's foreign priority and that Ohyama should be removed as a reference. However, Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

11. Applicant arguments, see page 8, filed March 15, 2004, with regard to the 35 USC 103 rejections of claims 13, 14, 18, and 20-21 are moot because a sworn translation of the priority papers has not been filed. It is also noted that the translation must provide support for the claimed invention to obtain the benefit of the priority filing date.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Battaglia

Michael Battaglia

W. R. YOUNG
PRIMARY EXAMINER